

OPERATION AND CARE
OF THE
EDISON PHONOGRAPH



THOMAS A. EDISON, Inc.

ORANGE, N. J., U. S. A.

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Foreword

Mr. Edison desires every purchaser of one of his phonographs to derive from it the maximum of enjoyment with the minimum of trouble and expense over the longest possible period of time.

With ordinary care the instrument and records will continue indefinitely to Re-Create the performances of the artists with the life-like fidelity for which they are famous.

Edison Records of Music That Lives

This book of Records is supplied with the Phonograph to assist New Edison Owners in choosing for their Library of Records, gems of music that are the proven favorites of thousands of owners of The New Edison.

The operation and care of this instrument, as explained in the following pages, are simple in the extreme. If anything at all goes wrong don't "tinker"—just call in your dealer. If *for any reason* you are not wholly satisfied write direct to us.

THOMAS A. EDISON, INC.,
Orange, N. J.,
U. S. A.

NOTE—No parts should be sent direct to the Factory unless the Factory finds it necessary for an owner to go to this trouble and requests it in writing. The dealer will attend to these details.

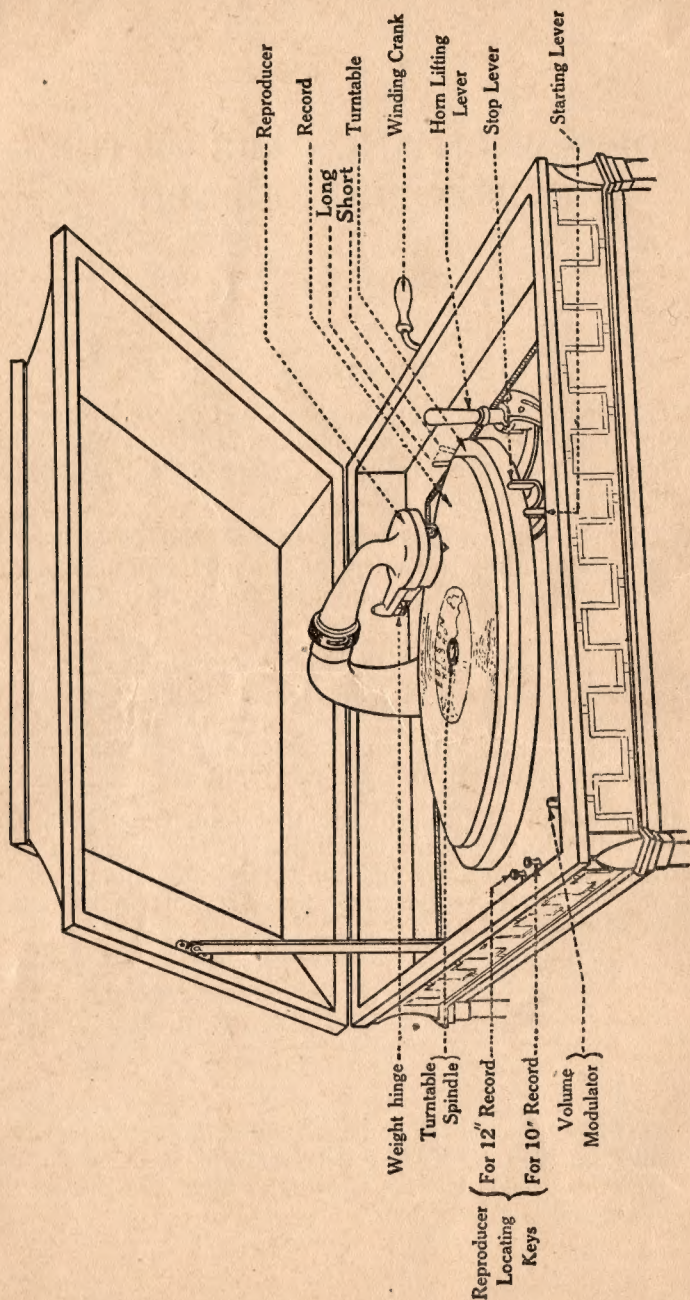


FIG. 1

OPERATION AND CARE OF THE EDISON PHONOGRAPH

EQUIPMENT

All Edison Disc Phonographs play "Standard" (short) Edison Disc Records. Some models are equipped with an attachment and will play both "Standard" (short) and Long Playing (long) Edison Disc Records. The attachment is located on the right-hand side of the motor plate.

Phonographs equipped with the Long Playing Attachment have as regular equipment a Standard Reproducer for playing Standard (short) Records, and a Long Playing Reproducer for playing ONLY Long Playing (long) Records.

Where extra volume is desired on dance records, a Dance Reproducer may be purchased from the dealer. It will play Standard (short) Records, but *will not* play Long Playing Records.

Remember:

Standard (short) Records may be played with either the Standard or the Dance Reproducer.

Long Playing Records can be played ONLY with the Long Playing Reproducer (marked "Long.")

Do not play Long Playing Records with Standard or Dance Reproducers. The use of these reproducers will positively ruin Long Playing Records.

LOCATION IN THE ROOM

Take every advantage of the acoustic properties of the room. Face the instrument toward the space where the audience is most apt to sit. Be sure that the phonograph rests firmly and steadily on a level floor.

TO PLAY A STANDARD RECORD

1. Wind the Phonograph.
2. Place the Standard Reproducer on the Phonograph. If extra volume is desired use a Dance Reproducer.
3. Shift the attachment lever to the point marked "short."
 - a. If the lever fails to shift all the way over to "short," let the turntable move a short distance in the direction in which it turns when playing. The gears will engage and the lever shift over.
 - b. Swing the reproducer to the extreme right.
 - c. Place a Standard (short) Record on the turntable.
 - d. Start the motor by pushing the starting lever to the left.
 - e. Guide the reproducer with one hand.
 - f. Lower the reproducer gently onto the moving record with the other hand, by raising horn-lifting lever.

TO STOP THE PHONOGRAPH

- g. Raise the reproducer by pushing down the horn-lifting lever.
- h. Stop the phonograph by pushing brake lever to the left. (The phonograph will stop itself automatically before the diamond runs onto the label.)

Caution—Before changing records swing the raised reproducer to extreme right, especially when using 12-inch records, to avoid injuring the Diamond Point.

TO PLAY A LONG PLAYING RECORD

1. Wind the Phonograph.
2. Place the Long Playing Reproducer on the Phonograph.

3. Shift the attachment lever to the point marked "Long."
4. Place a Long Playing Record on the turntable.
Caution—Be sure to swing the reproducer to extreme right, so records can be put on or taken off without injury to the diamond point.
5. Operate the Phonograph as usual.

OPERATION WITH LOCATING DEVICE

If instrument is equipped with this device (with its two "typewriter keys" to the left of the motor frame—one for 10" records and the other for 12" records) it is unnecessary to judge by the eye when the reproducer is over the starting point on the record.

To operate:

1. Let the turntable reach full speed, which it will do in a few seconds.
2. Swing reproducer to the extreme right.
3. Press the locating key shown in this table:

<i>Type of Record</i>	<i>Size</i>	<i>Locating Key to Press</i>
Standard	10-inch	10
Standard	12-inch	12
Long Playing.....	24-minute	10
Long Playing.....	40-minute	12

4. Swing reproducer as far left as it will go.
5. Lower the reproducer.
6. Release the key. The reproducer will then be located properly at the beginning of the music grooves.

VOLUME MODULATOR

1. If music is too loud push slide to the right.
2. If music is not loud enough push slide to the left.

THINGS TO WATCH

Now that it has been made clear how simple it is to operate the instrument, attention is invited to the following hints, which, if followed, will insure permanent satisfaction with its performance.

TURNTABLE SPEED

All music is played in the time in which it is written and is recorded on a complex recording machine running at a speed of exactly 80 revolutions per minute, whether for Standard or Long Playing Records.

If, therefore, a record is played at a different speed the music will be off key. The pitch will be too high if the speed is greater than 80 revolutions per minute and too low if the speed is less. Basses will sound like tenors or vice versa, and the delicate overtones and other musical qualities and values hopelessly lost.

For this reason great care and ingenuity have been exercised in providing a speed governor which once set will maintain the proper speed for a long time.

To check up on this speed the owner should occasionally time the revolutions of the turntable with his watch.

Just put on a record, slip a bit of paper under the record so it projects a little, start the record playing, and wait about half a minute for it to reach full speed. Then, as the record plays, and with watch in hand, count the number of revolutions per minute.

If the speed is less than 78 or more than 84 revolutions per minute it should be carefully brought back to 80. Some instruments have a speed adjustment knob on the iron motor plate by means of which the owner can adjust the speed.*

** Do not rely upon figures on the dial of any speed adjusting device, because wear of the break felts make these figures wholly worthless. The only sure way to adjust the speed is actually to time it in some such way as is outlined here.*

Other models are not so equipped and if the speed is wrong the nearest dealer will regulate it with an instrument specially designed for the purpose.

A speed of 2 revolutions per minute more or less than 80 will make no noticeable change in the quality of the music, unless some other instrument is played with the phonograph; but if an exact reproduction of the artist's performance is desired the speed should be kept at 80.

For lack of proper information or where the speed has changed owners may become dissatisfied with the rendition of the music without knowing just why. Hence the importance of this caution.

The importance of maintaining the proper speed cannot be over-emphasized.

Improper rendition due to wrong speed is one of those things that may continue for a long time before the degree of the music's distortion is realized and the cause recognized. It is therefore advisable to check up the speed occasionally.

All phonographs are carefully "tuned" and exactly adjusted before leaving the factory, but in some cases rough handling by railroad or truckmen may cause a variation of speed. The dealer is therefore glad to test the speed and regulate it with his special instrument, when unpacking and setting up the phonograph in the home of the owner.

CARE OF RECORDS

Records should be kept in their envelopes or in the filing cabinet and free from dust. Dust on a record will cause a sizzling or scratching sound when playing. A piece of silk or cotton plush makes a good brush for cleaning dusty records.

It is bad practice to pile records on top of each other without the protection of envelopes between them. This is especially true in the case of the Long Playing Record, where the extremely fine music grooves are more apt to be injured by scratches.

PROPER CARE AND USE OF REPRODUCERS

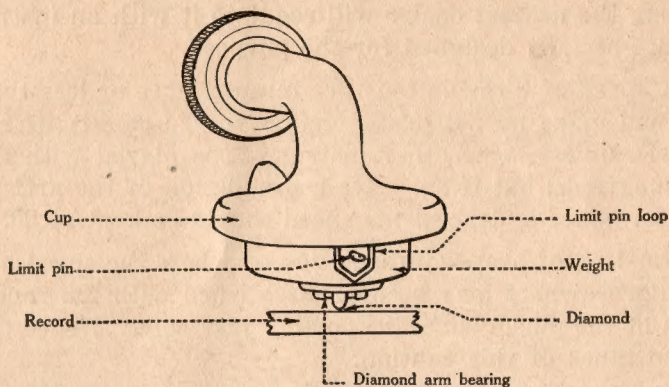


Fig. 2
Reproducer.



Fig. 3

Correct position of limit pin in loop indicating (by dotted lines) normal movement of pin.

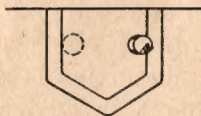


Fig. 4

Wrong positions of pin in loop. Music will repeat or skip.

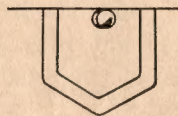


Fig. 5

Wrong position of pin in loop. Records will be cut.

There are three types of Edison reproducers:

1. Standard.
2. Dance, for extra volume.
3. Long Playing.

The Standard and Dance Reproducers will both play Standard (short) Records; the Long Playing Reproducer will play Long Playing Records (*Neither Standard nor Dance Reproducers will play Long Playing Records—they will positively ruin them.*)

The following tabulation readily shows what type of reproducer to use with any Edison record:

Type of Reproducer.	Kind of Record for Which Adapted.
Standard	Standard (short) ONLY.
Dance	Standard (short) ONLY, especially Dance.
Long Playing,	Long Playing ONLY.
(marked "Long")	Both 24-minute and 40-minute.

The care of the reproducer—the heart of the instrument—is extremely important.

Keep the diamond free from dust by passing tip of the finger over it occasionally. Always guard against the possibility of damage to the diamond. Only accident or carelessness will damage it.

If the reproducer is removed for any reason be sure to lay it on something soft with diamond up, or place it in the holder provided for it on certain models. If laid on a hard surface, diamond side down, the danger of damage to the diamond is increased.

If the reproducer becomes unsatisfactory *for any reason* take it at once to your dealer for examination. Inasmuch as damage to the diamond is invisible except under powerful microscopes he may have to send the reproducer to the factory for examination.

All reproducer repairs or replacements of reproducer parts are made only at the factory, (but no reproducer should be sent by owners direct to Orange). Reproducers should always be taken to the local dealer, who will send them to the factory and take care of all details.

In pursuance of Mr. Edison's wish that every owner of one of his phonographs shall derive from it the greatest possible enjoyment over the longest possible period of time at a minimum of expense, reproducers that are brought in to dealers as being unsatisfactory will be replaced by them with new ones, within a few days, upon the payment of not more than 50 cents for transportation and insurance charges. If, however, the Factory finds upon examination under the microscope, that the diamond is damaged or missing there will be an additional charge of \$3.50 for diamond replacement.*

In each case of reproducer replacement the owner will be notified direct by the Factory whether the \$3.50 dia-

* *This offer is of course subject to change by the Factory without notice. It is made only to owners in the United States inasmuch as customs regulations preclude its being made to owners in other countries.*

mond charge is made or is not made. This \$3.50 is bare cost, without profit to Factory or dealer.

When you take your reproducer to the dealer for adjustment or repair be sure to do the following things:

- (1) Sign the printed order the dealer will provide.
- (2) Get from the dealer a printed numbered receipt for the reproducer.
- (3) Have the dealer write your name and correct address on the tag which he sends to the factory with your reproducer.

Following these instructions carefully will prevent any mix-up of reproducers, insure the correctness of the factory charge, if any, and bring a notice from the factory direct, giving the amount of the charge, if any, made by the factory to the dealer, after a microscopic examination.

If you have any trouble with your reproducer and your dealer in spite of his desire to please you, is unable to adjust the trouble to your *entire satisfaction*, just drop a line to the Factory about it. (But don't send your reproducer to the Factory unless we specifically write and ask you to do so.)

"TIPS"

The Instrument is designed, built and adjusted in such a way as to make it last indefinitely without repairs or adjustments. If, however, it receives careless handling or if it is not properly cared for, trouble is inevitable. The following suggestions are listed with a view to helping the owner avoid trouble. Owner, dealer and Factory all lose when anything goes wrong.

1. Before you change records or remove turntable be sure first to swing the reproducer to the right as far as it will go. Otherwise the record or turntable is apt to strike the diamond and damage or break it.
2. Lower the reproducer onto the record gently. Don't *drop* it.

3. Don't lower the reproducer onto the record until it is over the playing grooves; otherwise the diamond may catch on the edge of the record and damage the reproducer or even break the diamond.
4. Do not attempt to move reproducer while it is in contact with the record, i. e., in playing position. Raise it first and then move it either way.
5. Don't let everybody and anybody tune your phonograph any more than you would let everybody tune your piano.
6. The record should never be oiled.
7. The diamond never needs oiling.
8. Be careful of the diamond at all times. It is not very delicate, but it isn't a lump of iron, either!
9. Remember this phonograph is a musical instrument and merits treatment as such.
10. Don't forget to lubricate occasionally and let the machine run down when through playing, to distribute the lubricant between the leaves of the springs.
11. Use only Edison lubricants.
12. Don't attempt to play other than Edison records with the Edison reproducer. It can't be done; and you will ruin the records. (Get an "attachment" if you must play other makes of records.)
13. Don't attempt to play the different types Edison records except with the right type of Edison reproducer.
14. Before playing any Edison record on a Long Playing phonograph, glance at the "gear shift" lever on right-hand side of motor plate, to see that it is in the correct position for either Standard or Long Playing records, viz.: "Short" or "Long."
15. Don't attempt to play Edison records with talking

machine reproducers. It can't be done. You will ruin your records.

16. The cabinet is a fine piece of furniture and should be treated as such. A few drops of furniture crude oil on a soft cloth will work wonders.
17. Don't send parts to the Factory for repairs. Your dealer is the repairman. If, in spite of all he can do, he is still unable to correct the trouble, write the Factory.
18. Remember to time the revolutions of the turntable once in a while. 80 revolutions per minute is correct.
19. Don't play the phonograph if the limit pin is touching anywhere. (See Figures 3, 4 and 5.)
20. Don't *pull* the horn if you remove the reproducer. Use both hands in removing the reproducer, one to turn the lock-ring and hold it, and the other to remove the reproducer—it will lift out easily.
21. You need not be concerned if the limit-pin "wabbles" either up or down or from side to side (see figure 3). The weight to which the pin is attached is made "full-floating" purposely in order to "take up" just such variations as are indicated by this wobbling. Records cannot be manufactured or kept in all climates absolutely true to the thousandth part of an inch in thickness or shape, and the weight is made flexible to accommodate all reasonable variations.
22. Don't play the phonograph if anything is wrong with it. You may injure it or spoil your records. Send for your dealer if you don't know what's the matter.
23. Don't "tinker" or attempt to repair or adjust. Your dealer will be glad to do it for you. He wants you always to enjoy a perfectly working, properly timed instrument.

"INSIDE" INFORMATION

"*Repeats*" or "*Skips*." At times you may hear parts of the music repeated or skipped for no apparent reason. These seemingly inexplicable repetitions and omissions are called "repeats" and "skips."

They may be caused by the limit-pin touching its guard one side or the other (see figure 4). This may be due to the way in which the reproducer is lowered onto the record. It must be lowered down *straight* all the way. If the limit pin touches either side of its guard in playing, raise the reproducer and lower it again more carefully. If this does not cure the trouble or if, even when it starts correctly, the pin then gradually gets nearer and nearer to its guard, ask your dealer to adjust it, for the horn may have been forced out of alignment. Repeats may also be caused by jarring the phonograph or having it on an uneven floor.

"*Cutting of Records*" may be caused by an improper adjustment of the height of the reproducer, which causes the limit pin to touch the cup (see figure 5). The dealer will be pleased to adjust it.

Cutting may also be caused by a chipped or broken diamond. If this is suspected take the reproducer to your dealer before playing any more records.

If the normally brilliant black record takes on a grayish color it may be due to cutting by a nicked diamond. A badly broken diamond will cut the record badly, rasp when playing, and destroy the records rapidly.

Cutting of the music groove will always occur if the wrong type of Edison reproducer is used.

"*Scratching*" may be due to dust in the record grooves, or to a broken or chipped diamond. Note whether all records scratch equally. If cleaning the record does not help, take the reproducer to your dealer, and let him try it out.

"Wrong Speed" may be due to some accident in handling or some severe jar which has affected the adjustment. It may perhaps be due to clogging of governor by dust or lint. If cleaning and lubrication do not suffice, send for your dealer.

"Chugging" is caused by the sudden release of sticking leaves of the main-spring. Wind the machine fully and let it run down completely several times. If this does not effect a cure, squeeze a tube of Edison Spring Lubricant into each spring barrel as specified in the paragraphs under *"Lubrication."* Then repeat the winding and running down. If the spring still chugs it may need washing in kerosene or gasoline and re-lubrication. Let your dealer attend to this messy little job.

Machine stops too late or too soon. A slight adjustment of the automatic stop will cure this. Let your dealer make this adjustment.

"Flatting and Sharping." If on a standard note there is a wavering or slight variation of pitch, it may mean that the governor is gummed up. Do not try to correct this yourself. The dealer's repairman is the only safe doctor for this extremely rare ailment.

When you are sick it is well worth the doctor's fee to be made well again. When something is wrong with your phonograph and the cause and cure are not immediately apparent and easy, call in your expert dealer. His services are just as well worth his moderate fee as are the doctor's.

WHEN YOU MOVE

In packing up to move your furniture, it will be sufficient to remove all records from the phonograph, tie the horn so it won't bang about and caution the movers to keep the instrument "right side up with care." If, however, you are shipping your furniture some distance, get your dealer to supply you with a shipping case and pack it up properly.

LUBRICATION

Every machine of any kind requires lubrication to prevent undue wear and to insure proper operation. Use only Edison oils and greases in Edison phonographs. A small amount of each is supplied with every instrument. Dealers carry additional supplies.

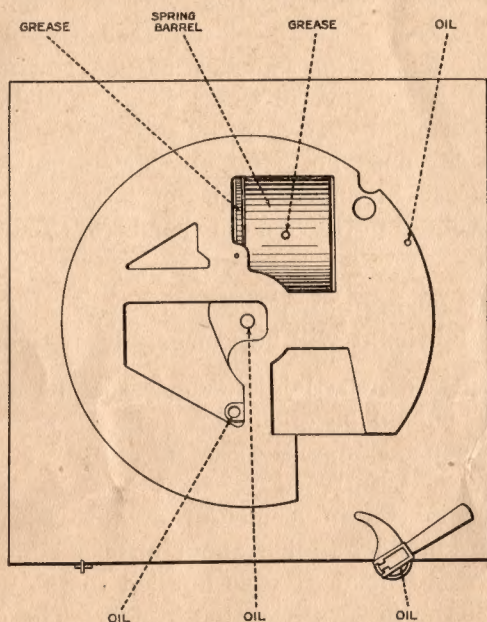


FIG. 6
Lubrication Diagram

To lubricate the phonograph, lift off the turntable, squirt a few drops of oil in each of the points marked "oil," and a drop or two on moving parts at points indicated. Apply a touch of grease to gears, etc.

SPRING LUBRICATION

It is unnecessary to lubricate the main spring of the motor unless the bumping, jarring noise known as "chugging" cannot be stopped by winding and letting it run

down several times. Remove the turntable, turn spring barrel by means of the winding crank until the spring is fully wound, and until the grease plug in the spring barrel comes uppermost. Put a block of wood or a pencil between the turntable spindle and the motor frame to keep the spindle from turning. Remove the grease plug and squeeze into the barrel the contents of the tube of spring lubricant which comes with the phonograph. Replace plug, remove the block and set turntable back on the spindle. Let spring run down fully, rewind and let it run down again several times so as to distribute the lubricant thoroughly between the coils of the spring. If this treatment does not stop any noise caused by the spring, squeeze in another tube of lubricant. If even this does not stop the trouble send for your dealer's repairman.

Note: Let spring unwind after playing now and then so that the lubricant will be thoroughly distributed.

No set rules can be laid down as to how often your phonograph should be oiled and greased as above. In each case it depends upon the amount of use a phonograph receives and the temperature conditions of the room. For ordinary home use in a moderately heated room the phonograph should be oiled about once a month, and a slight touch of Edison Grease applied to the gears and worms with the fingers or a tooth-pick. These may be reached by removing the grille and reaching into the mechanism.

Caution. Use only Edison oil and greases. This caution is not an attempt to sell our lubricants but merely an attempt to put at the disposal of the owner lubricants which have been developed, after exhaustive experiments and tests, as the very best for the purpose.

